UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY
PEORIA 5, ILLINOIS

February 5, 1948

Dr. Joshua Lederberg
Department of Genetics
The University of Wisconsin
Madison 6, Wisconsin

Dear Joshua:

I am glad to be of some assistance to you in the interesting work you describe in your letter of January 27. Under separate cover I am sending you samples of calcium lactobionate, calcium maltobionate, calcium 2-keto-d-gluconate and calcium-d-xylonate. If the amounts seem rather small, it is because analytically pure samples are rather hard to come by with this type of compound although we can easily prepare the crude material (ca 90 percent purity) in kilogram lots.

The analytical data is as follows:

Calcium lactobionate 2512-29-A (3.0 grams)

This sample has 8.68 percent moisture. On the dried sample the values were:

	C	H	Ca
Calc.	38.19	5.61	5.31
Found	38.0	5.95	5.22

Hydrolysis data on the dried sample showed 96 percent purity. The lactose on the undried sample was 0.25 percent.

Calcium lactobionate 2378-7-A (200 mg.)

This sample has 5.58 percent moisture. On the dried sample the values were:

	C	H	Ca
Calc.	38.19	5.61	5.31
Found	38.0	5.58	5.38

The rotation on the dried sample was +25.1°. The compound has no detectable lactose.

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Calcium maltobionate 2378-8-A (1.00 g.)

This sample has 5.22 percent moisture. The values on the dried sample were:

	C	H	Ca
Calc.	38.19	5.61	5.31
Found	38.1	5.61	5.58

The rotation on the dried sample was +103°.

Calcium 2-keto-d-gluconate trihydrate 2101-1-A (4.0 g.)

	C	H	Ca	H_2O
Calc. for trihydrate	30.0	5.04	8.34	11.2
found	30.1	5.08	8.31	11.5

Calcium d-xylonate 2292-19-A (400 mg.)

This sample has 6.70 percent moisture. The values on the dried sample were:

	C	H	Ca
Calc.	32.43	5.25	10.82
Found	32.7	5.25	11.2

Calcium d-xylonate 2292-19-B (2.0 g.)

This is the second crop from the filtrate from 2292-19-A. We have no analytical data on this sample, but we have reason to believe it would be good enough for preliminary experiments. We would appreciate it if you would send it over to your Chemistry Department for carbon, hydrogen, and calcium analyses and then forward the results to us so that when we get future requests we can indicate the quality of the product.

I hope these samples will be of assistance to you, and I would appreciate it if you would keep me informed of the progress of your work. It interests me very much.

Best regards.

Sincerely yours,

Frank H. Stodola

Frank H. Stodola, In Charge
Chemistry Section
Fermentation Division
Northern Regional Research Laboratory

Enclosure